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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,146	07/29/2003	James Ruion Young Rawson	RD-29279	6569
6147	7590	04/19/2006	EXAMINER	
GENERAL ELECTRIC COMPANY GLOBAL RESEARCH PATENT DOCKET RM. BLDG. K1-4A59 NISKAYUNA, NY 12309			PATEL, RITA RAMESH	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,146

Applicant(s)

RAWSON ET AL.

Examiner

Rita R. Patel

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1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 33 and 34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 33-34 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/29/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-32, drawn to an apparatus, classified in class 68, subclass 5R.
- II. Claims 33-34, drawn to a process, classified in class 8, subclass 149

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the process as claimed can be used to practice another and materially different apparatus such as groundwater remediation processes.

During a telephone conversation with Jason Klindtworth on 04/13/06 a provisional election was made without traverse to prosecute the invention of group I, claims 1-32. Affirmation of this election must be made by applicant in replying to this Office action. Claims 33-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

The drawings received 07/29/03 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; claim 2 states, "said fluid processing mechanism 4 further comprises a flushing device"; it is unclear as to what the "4" in the processing mechanism 4 is in reference to, please clarify and provide appropriate correction. For the purpose of examination, the Office will assume the number 4 is a typo and will read the claim as follows: "said fluid processing mechanism further comprises a flushing device".

Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; claim 23 states, "said mechanical filter has a mesh size in a range from about 50 microns to about microns"; the range being claimed here is unclear, it appears the claim is missing an upper range parameter. For the purpose of examination the Office will read this portion of claim 23 to read as "said mechanical filter has a mesh size in a range from about 50 microns to about 1000 microns".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt et al. (US Patent No. 6,063,135) herein referred to as "Berndt".

Berndt teaches a dry cleaning system in which dry cleaning machinery is used with solvent in combination with an organic and/or organo-silicone based detergent which is specifically tailored for working in conjunction with the solvent to afford optimal cleaning. The method comprises loading articles into a cleaning basket; agitating the articles in the solvent and detergent composition in which they are immersed; removing most of the solvent and detergent composition; centrifuging the articles; heating the articles and remaining composition and creating vapors, condensing vapors and optionally reducing the pressure to dry the articles, recovering and recycling solvent and removing the articles from the basket after cooling the articles (Abstract). The position is taken that one of ordinary skill in the art would at once envisage that the agitation, centrifuging, heating, condensing and recovery/recycling steps taught by Berndt is anticipatorily automated by means of a controller. During the cleaning cycles the solvent and the detergent mixture is pumped out of the basket through a "button trap" and then across a filter, the filter system helps to remove the particular and impurities

from the mixture; this reads on applicant's claim for a particulate filter. Moreover, Berndt discloses that any type of cartridge, discs, flex-tubular or rigid-tubular filtration system may be used either individually or in combination (col. 8, lines 36-38); this reads on applicant's claims for ultrafiltration filters, singular cartridge filters and combinational cartridge filters. Said cartridge filter may further comprise an additive such as diatomaceous earth (col. 8, lines 38-40).

Berndt discloses the claimed invention except for a specific mesh size, pore size or operability relative to molecular weight for the ultrafiltration, particulate or mechanical filters, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the mesh size, pore size and/or passable molecular weight for said filter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Applicant's claimed features are regarded as result effective variables because as the filter's mesh size, pore size or molecular weight capacity are attuned the filter will applicably allow more or less of the solution to pass there through, therefore, depending on the desired filtering expectations these features may be optimized.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt as above, and further in view of Dayton (US Patent No. 4,793,938).

Berndt teaches the claimed invention except for a flushing device. However, Dayton discloses an apparatus for decontaminating dry cleaning fluid and filters such

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that the dry cleaning fluid is forced through a filter means in a direction opposite to the single direction of flow in the recirculation loop, the dry cleaning is forced out of the filter housing to flush contaminants from the dry cleaning filter means (col. 3, lines 18-22); this reads on applicant's claims for a flushing device. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a flushing device in Berndt, as shown by Dayton, to achieve increased filtering functions by way of refreshing the filtering device.

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt as applied to claim 4 above, and further in view of Rasmussen (US Patent No. 6,857,162).

Berndt teaches the claimed invention except for an ultrafiltration membrane of a spiral configuration. Rasmussen teaches a cleaning and/or treatment device wherein a filter unit comprises at least one cross-flow filter whereby said filter preferably is a membrane filter (Abstract). The membrane filter disclosed by Rasmussen is preferably packed in a flat, spiral would, tubular fiber configuration (col. 5, lines 17-18).

Rasmussen's disclosure may read on an article cleaning apparatus, hence, this reads on applicant's claims wherein said ultrafiltration membrane is a spiral would configuration. It would be obvious to one of ordinary skill in the art at the time of the invention to incorporate a spiral ultrafiltration membrane in Berndt, as shown by Rasmussen, to achieve desirable filtering means.

Claims 13-16, 18-22-25 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt further in view of Dayton, as taught above.

Berndt teaches the claimed invention except for a regeneration device and a clean fluid device. However, Dayton teaches a system for purging contaminants from dry cleaning fluid used in a machine for dry cleaning clothing while concurrently decontaminating the filter cartridges through which the dry cleaning fluid is passed through a circulating loop and a plurality of filter cartridge housings. A portion of the dry cleaning fluid in the selected housing is then vaporized within the filter housing while another portion is forced in liquid form through the filter cartridges in a direction opposite to the flow in the recirculation loop. This liquid portion is passed to a separate boiler for vaporization; the vaporized dry cleaning fluid from both the filter housing and the boiler is condensed and passed to a gravity separator, where water is separated from the dry cleaning fluid. The dry cleaning fluid is then returned to the recirculation loop (Abstract). Hence reading on applicant's claims for a regeneration device and clean fluid device. It would be obvious to one of ordinary skill in the art at the time of the invention to use a regeneration and clean fluid system in Berndt, as shown by Dayton, with expectation of improving cost efficiency, increased operative use of the working fluid, minimizing waste, and for environmental reasons.

Claims 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt and Dayton as applied to claim 16 above, and further in view of Rasmussen which is applied here for the same reasons as given above for claim 5.

Claims 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berndt and Dayton as applied to claim 25 above, and further in view of Arbizzani (Pub. No. EP 0620309 A1).

Berndt and Dayton teach the claimed invention, except fail to teach a cartridge in communication with a water adsorption media for regeneration purposes. However, Arbizzani teaches an activated-carbon solvent treatment unit for dry-cleaning machines with an improved regeneration unit. The regeneration container 2 is internally provided with a deflector 10 that forms an activated-carbon containment compartment 11 in an upward region and, in a downward region. A water containment compartment 12 which contains heating elements 13 that are suitable to generate steam for flushing the carbon; said upward region and said lower region of said container 2 are connected by a flushing water return duct 14 that includes a condensation unit 15 and a water-solvent separator 16. It would be obvious to use a water adsorption media unit in Berndt, as shown by Dayton, with expectation of regeneration and recovery of the solvent in said article cleaning apparatus and thereby achieving improved cost efficiency, increased operative use of the solvent, minimizing waste, and for environmental reasons.

Moreover, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make integral the article cleaning apparatus disclosed by Berndt with said features of Dayton since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RRP


MICHAEL BARR
SUPERVISORY PATENT EXAMINER